

What is claimed is:

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1. A method for managing channel assignment in a wireless communication system having a predetermined bandwidth, said predetermined bandwidth being divided into a plurality of sub-bands that each include a plurality of channels, said method comprising the steps of:

specifying a power range for each sub-band within the plurality of sub-bands, said power range representing a range of signal powers that are to be supported by individual channels within the sub-band, wherein at least two of said plurality of sub-bands are assigned power ranges that are different from one another;

10 ascertaining a power level associated with a first wireless connection in said wireless communication system;

identifying at least one sub-band within the plurality of sub-bands that has a power range encompassing said power level; and

15 assigning a channel within said at least one sub-band to said first wireless connection.

2. The method claimed in claim 1, wherein:

said plurality of sub-bands includes a first sub-band having a plurality of code division multiple access (CDMA) channels.

20 3. The method claimed in claim 1, wherein:

said plurality of sub-bands includes a first sub-band having a plurality of time division multiple access (TDMA) channels.

25 4. The method claimed in claim 1, wherein:

said step of ascertaining a power level includes measuring a power level of a signal received via said first wireless connection.

5. The method claimed in claim 1, wherein:
said step of ascertaining a power level includes determining a transmit power level required to communicate with a remote entity via said first wireless connection.

5 6. The method claimed in claim 1, wherein:
said wireless communication system includes a satellite communication system,
wherein said predetermined bandwidth represents a bandwidth available for
communication between a satellite and a plurality of terrestrial users.

10 7. A system for providing wireless communication between a communication
platform and a plurality of subscribers, said system having a predetermined available
bandwidth for providing said wireless communication, said predetermined available
bandwidth being divided into a plurality of sub-bands that are each capable of supporting
a plurality of communication channels, said system comprising:

15 means for determining a power level associated with a wireless connection
between said communication platform and one of the plurality of subscribers;

means for selecting one of said plurality of sub-bands based on said power level
determined by said means for determining; and

20 means for assigning a channel within said selected sub-band to said wireless
connection for use in providing wireless communication between said communication
platform and said one of said plurality of subscribers.

25 8. The system claimed in claim 7, wherein:
said plurality of sub-bands includes a first sub-band having a plurality of code
division multiple access (CDMA) channels.

9. The system claimed in claim 7, wherein:

said plurality of sub-bands includes a first sub-band having a plurality of time division multiple access (TDMA) channels.

10. The system claimed in claim 7, further comprising:

5 means for monitoring said wireless connection to determine whether a power condition has changed during said wireless connection; and

means for assigning a new channel within a different sub-band to said wireless connection when said means for monitoring determines that said power condition has changed.

11. The system claimed in claim 7, wherein:

10 said plurality of sub-bands are each associated with a power range, wherein said means for selecting one of said plurality of sub-bands includes means for determining which of said plurality of sub-bands has an associated power range that encompasses said power level.

12. A method for providing multiple access communications between a first location and a second location, said method comprising the steps of:

15 providing a predetermined frequency band for use in establishing communication connections between said first location and said second location;

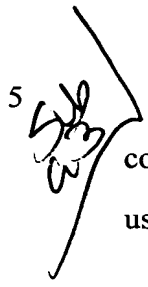
segmenting said predetermined frequency band into a plurality of sub-bands;

20 providing a plurality of code division multiple access channels within each of said plurality of sub-bands; and

25 limiting communication within each of the plurality of sub-bands to signals meeting a predetermined power criterion.

13. The method claimed in claim 12, wherein:

said limiting step includes specifying a power range for each of said plurality of sub-bands.

5  14. The method claimed in claim 13, wherein:
said limiting step includes determining a power level associated with a first communication connection and selecting a sub-band from said plurality of sub-bands for use by said first communication connection based on said power level.

10 15. The method claimed in claim 14, wherein:
said limiting step includes assigning a CDMA channel within said selected sub-band to said first communication connection.

15 16. The method claimed in claim 12, wherein:
said step of segmenting said predetermined frequency band into a plurality of sub-bands includes defining a plurality of receive sub-bands.

20 17. The method claimed in claim 12, wherein:
said step of segmenting said predetermined frequency band into a plurality of sub-bands includes defining a plurality of transmit sub-bands.

25 18. The method claimed in claim 12, further comprising:
periodically changing a power criterion associated with a first sub-band in the plurality of sub-bands.

19. The method claimed in claim 12, wherein:
said first location includes a multi-channel communications satellite orbiting about a primary body.

20. The method claimed in claim 19, wherein:

said second location includes a footprint region on said primary body associated with said multi-channel communications satellite.

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21. A method for providing multiple access communications between a first location and a second location, said method comprising the steps of:
providing a predetermined frequency band for use in establishing communication connections between said first location and said second location;
dividing said predetermined frequency band into a plurality of independent communication channels using at least two different multiple access methods;
10 separating said plurality of independent communication channels into a plurality of channel groups; and
limiting communication within each of the plurality of channel groups to signals meeting a predetermined power criterion.

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22. The method claimed in claim 21, wherein:

said at least two different multiple access methods includes frequency division multiple access (FDMA) and code division multiple access (CDMA).

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23. The method claimed in claim 21, wherein:

said at least two different multiple access methods includes frequency division multiple access (FDMA) and time division multiple access (TDMA).

24. The method claimed in claim 21, wherein:

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said at least two different multiple access methods includes time division multiple access (TDMA) and code division multiple access (CDMA).

25. The method claimed in claim 21, wherein:

said at least two different multiple access methods includes frequency division multiple access (FDMA), time division multiple access (TDMA), and code division multiple access (CDMA).

5 26. The method claimed in claim 21, wherein:
 said limiting step includes specifying a power range for each of the plurality of
 channel groups, wherein at least two of the plurality of channel groups have different
 power ranges from one another.

10 27. The method claimed in claim 26, wherein:
 said limiting step includes determining a power level associated with a first
 communication connection and selecting a channel group from said plurality of channel
 groups based on said power level.

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